REMARKS

Claims 1-20 are pending in the present application.

Applicants respectfully request reconsideration of the application in view of the remarks appearing below.

Rejection Under 35 U.S.C. § 102

Claims 1-20 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,757,658 to Rodman et al., stating Rodman et al. disclose all of the limitations of these claims. Applicants respectfully disagree.

Rodman et al. disclose a system and method for optimizing the placement of standard cells (e.g., FIG. 3B, 50a-50i) within custom circuit blocks (e.g., FIGS. 2 and 3A, 20a-c) by optimizing the placement of input/output ports (IOPs) (e.g., FIG. 2, 70a-70d) relative to the corresponding respective standard cells. By taking into account the positions of the standard cells associated with a given IOP in a particular custom circuit block and adjusting the location of that IOP near these standard cells, the circuitry internal to the custom circuit block may be more efficiently placed. According to Rodman et al., this efficient placement can result in a reduction in size of the custom circuit block of up to 30%.

The Rodman et al. method includes receiving IOP placement constraints for each of the custom circuit blocks that include eligible edge locations (i.e., where a particular IOP may be placed on the perimeter of that custom circuit block), the order of a particular IOP relative to adjacent IOPs within a group, and the maximum density of IOPs within a group of IOPs. Based on these placement constraints, all of the IOPs of each custom circuit block are arbitrarily assigned initial locations using a conventional global floorplanning process. Col. 7, line 9, to col. 9, line 5. Then, the standard cells of each custom circuit block are given initial placements using a conventional placement procedure and in a manner that minimizes the length of the wire connecting a given IOP to the standard cells that communicate via that IOP. Col. 9, lines 6-44. These initial placements of the standard cells are then stored for later use. Then, the Rodman et al. method displaces the locations of the IOPs in order to optimize their positions according to one or more user-selected optimization rules, particularly, wire-length minimization rules and routability rules. Col. 9, line 45 to col. 10, line 56. The foregoing steps may be repeated a number of times to achieve successively better optimization. Col. 10, line 57 to col. 11, line 10.

After optimization, the Rodman et al. system performs routing and placement steps. Col. 11, lines 11-22.

Importantly, Applicants note that Rodman et al. do not even suggest in any of the steps of their method that edge constraints of a first macro are compared to edge constraints of a second macro. For example, in the Rodman et al. method, the IOP placement constraints of the custom circuit blocks are manipulated relative only to the standard cells within that block, without regard to any other custom circuit blocks that may be present. There is simply no comparison of edge constraints performed relative to the custom circuit blocks. Regarding the standard cells, there are no edge constraints on these cells. Therefore, *a fortiori*, Rodman et al. are completely silent on comparing edge constraints of one standards cell to the edge constraints of another standard cell.

Turning to the rejected claims, independent claims 1, 8 and 14 each contain a limitation directed to comparing one or more edge constraints of a first integrated circuit macro to one or more edge constraints of a second integrated circuit macro. As discussed in the paragraph immediately above, Rodman et al. do not so much as suggest such a limitation. Therefore, the Rodman et al. patent cannot anticipate any of independent claims 1, 8 and 14, nor claims 2-7, 9-13 and 15-20 that depend therefrom.

In addition to the Rodman et al. patent not anticipating independent claims 1, 8 and 14, the Rodman et al. patent does not disclose or even suggest any of the limitations of at least dependent claims 2-7, 9-13 and 15-19. For this additional reason, each of these dependent claims is separately patentable over the Rodman et al. patent.

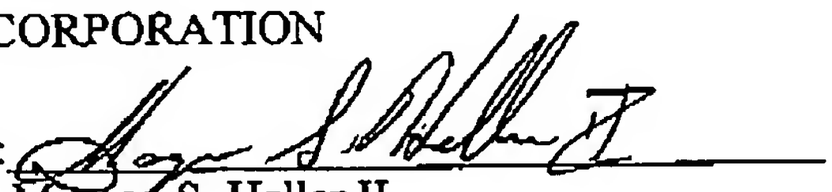
For at least the foregoing reasons, Applicants respectfully request that the Examiner withdraw the present rejection.

CONCLUSION

In view of the foregoing, Applicants submit that claims 1-20 are in condition for allowance. Therefore, prompt issuance of a Notice of Allowance is respectfully solicited. If any issues remain, the Examiner is encouraged to call the undersigned attorney at the number listed below.

Respectfully submitted,

INTERNATIONAL BUSINESS MACHINES CORPORATION

By: 

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